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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Michael S. Banik  
Application No.: 10/825,860  
Date Filed: 04/16/2004  
Title: ELECTROACTIVE POLYMER BASED ARTIFICIAL SPHINCTERS AND  
ARTIFICIAL MUSCLE PATCHES  
Group Art Unit: 3736  
Examiner.: John P. Lacyk  
Atty. Docket: 01-468US2

INFORMATION DISCLOSURE STATEMENT (IDS)

Mail Stop Amendment  
Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

SIR:

In accordance with 37 C.F.R. §1.56 and in compliance with 37 C.F.R. §§1.97 and 1.98, the references listed on attached Form PTO/SB/08 and/or subsequently identified herein, are being submitted herewith for consideration by the United States Patent and Trademark Office.

I. COPIES

- a. ☐ A legible copy of (i) each foreign patent; (ii) each publication or that portion which caused it to be listed; and (iii) all other information or that portion which caused it to be listed, is included herewith.
- b. ☒ Any patents, publications or other information which are listed on PTO/SB/08 which are not enclosed herewith were previously cited by or submitted to the PTO in one of the following applications which has been relied upon for an earlier filing date under 35 U.S.C. §120:

Serial No. 10/142,861 Filed 05/10/2002 now U.S. Patent No. 6,749,556 Issued 06/15/2004

II. CONCISE EXPLANATION OF THE RELEVANCE (check at least one box)

- a. ☒ Except as may be indicated below in (b) of this section, all of the patents, publications or other information are in the English language (concise explanation not required).
- b. ☐ A concise explanation of the relevance of all patents, publications or other information listed that is not in the English language is as follows:
- c. ☐ The following additional information is provided for the Examiner's consideration:

III. ☐ CROSS REFERENCE TO RELATED APPLICATION(S)

The Examiner is advised that the following co-pending application(s) contain(s) subject matter that may be related to the present application. By bringing this (these) applications to the Examiner's attention, Applicant(s) does(do) not waive the confidentiality provisions of 35 U.S.C. §122.

Serial No.

Filing Date

Art Unit

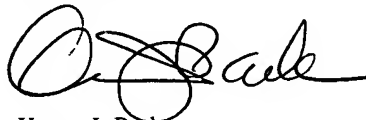
FEEES

- IV. ☐ THIS IDS IS BEING FILED UNDER 37 C.F.R. §1.97(b): (check one box)
- a. ☐ within three months of the filing date of a national application other than a continued prosecution application under § 1.53(d) (37 C.F.R. §1.97(b)(1)). No fee or statement is required.
  - b. ☐ within three months of the date of entry of the national stage as set forth in § 1.491 in an international application (37 C.F.R. §1.97(b)(2)). No fee or statement is required.
  - c. ☐ before the mailing date of a first Office Action on the merits (37 C.F.R. §1.97(b)(3)). No fee or statement is required.
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before the mailing date of any of a Final Office Action under 37 C.F.R. §1.113, a Notice of Allowance under 37 C.F.R. §1.311, or an action that otherwise closes prosecution in the application (See 37 C.F.R. §1.97(c)).
- a. ☒ No statement; therefore, charge deposit account 50-1047 the fee set forth in 37 C.F.R. §1.17(p).
  - b. ☐ See the statement below. No fee is required.
- VI. ☐ THIS IDS IS BEING FILED UNDER 37 C.F.R. §1.97(d):  
on or before payment of the issue fee and is accompanied by the following:
- 1) a statement under 37 C.F.R. §1.97(e) as provided below; and
  - 2) charge deposit account 50-1047 the petition fee set forth in §1.17(p).
- VII. ☐ STATEMENT UNDER 37 C.F.R. §1.97(e) (check only one box, if applicable)  
The undersigned hereby states that
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  - b. ☐ no item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application, and to knowledge of the person signing the statement after making reasonable inquiry, no item of information contained in the IDS was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement, or
  - c. ☐ some of the items of information contained in the IDS were cited in a communication from a foreign Patent Office. As to this information, the undersigned states that each item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS. As to the remaining information, the undersigned hereby states that no item of this remaining information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application or, to the knowledge of the person signing the statement after making reasonable inquiry, no item of information contained in the IDS was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement.
- VIII. PAYMENT OF FEES
- ☐ A check in the amount of \_\_\_\_\_ is enclosed for the above-identified fee(s).
  - ☐ Please charge Deposit Account No. 50-1047 in the amount of \$180.00 for the above-indicated fee(s).
  - ☒ If Applicant has overlooked any additional fees, or if any overpayment has been made, the Commissioner is hereby authorized to credit or debit Deposit Account 50-1047.
  - ☐ Two Copies of this paper are attached for Deposit Account charges and debits.

It is Applicant(s)' opinion that the claims presently on file patently distinguish the present invention from each of these references. The above references are being cited only in the interests of candor and without any admission that they constitute statutory prior art or contain matter which anticipates the invention or which would render the same obvious, either singly or in a combination, to a person of ordinary skill in the art.

If the Examiner has any questions concerning this IDS, he/she is requested to contact the undersigned. If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule (with a petition if necessary) and charge the appropriate fee to Deposit Account No. 50-1047.

Respectfully submitted,



Keum J. Park  
Attorney for Applicant(s)  
Reg. No. 42,059

MAYER FORTKORT & WILLIAMS  
Customer Number 27774

Tel. 908-518-7700  
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Enclosures:

☒  
☐  
☐  
☐

PTO/SB/08  
References (excluding U.S. patent documents)  
Foreign Search Report  
Other:

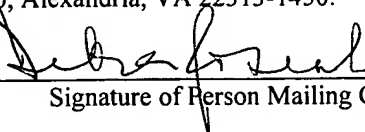
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Substitute for form 1449A/PTO

# **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet

1

of

3

## **Complete if Known**

Application Number	10/825,860
Filing Date	04/16/2004
First Named Inventor	Michael S. Banik
Group Art Unit	3736
Examiner Name	Lacyk, John P.
Attorney Docket Number	01-468US2

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM- DD-YYYY
		Number	Class/Subclass		
	1	4222377	128/1R	Burton	09-16-1980
	2	4571749	623/14	Fischell	02-25-1986
	3	4587954	128/1R	Haber	05-13-1986
	4	4878889	600/31	Polyak	11-07-1989
	5	5100933	523/300	Tanaka et al.	03-31-1992
	6	5250167	204/209	Adolf et al.	10-05-1993
	7	5389222	204/299	Shahinpoor	02-14-1995
	8	5556700	428/332	Kaneto et al.	09-17-1996
	9	5562598	600/29	Whalen et al.	10-08-1996
	10	5603337	128/898	Jarvik	02-18-1997
	11	5631040	427/100	Takuchi et al.	05-20-1997
	12	5702343	600/37	Aferness	12-30-1997
	13	5738626	600/16	Jarvik	04-14-1998
	14	5800528	623/3	Lederman et al.	09-01-1998
	15	5855565	604/104	Bar-Cohen et al.	01-05-1999
	16	5888188	600/30	Srougi et al.	03-30-1999
	17	5893826	600/31	Salama	04-13-1999
	18	6022312	600/29	Chaussy et al.	02-08-2000
	19	6095968	600/16	Snyders	08-01-2000
	20	6190408	623.3,1	Melvin	02-20-2001
	21	6239906	600/37	Vanden Hock et al.	09-25-2001
	22	6302917	623/23.68	Dua et al.	10-16-2001

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	T
		Office <sup>3</sup>	Number <sup>4</sup>	Class/Subclass			
	1	WO	01/58973	C08G	Pelrine, Ronald E. et al.	08-16-2001	
	2	WO	97/26039	A61M 25/09	University of New Mexico	07-24-1997	

Examiner  
Signature

Date  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>12</sup>Unique citation designation number. <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

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			Application Number	10/825,860
			Filing Date	04/16/2004
			First Named Inventor	Michael S. Banik
			Group Art Unit	3736
			Examiner Name	Lacyk, John P.
Sheet 2 of 3	Attorney Docket Number	01-468US2		

OTHER PRIOR ART—NON-PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	1	BROCK, DAVID L. "Review of Artificial Muscle Based on Contractile Polymers". Massachusetts Institute of Technology Artificial Intelligence Laboratory. A.I. Memo No. 1330, November 1991. 11. 1-12.	
	2	"Important Information for Patients Considering an Action Neosphincter", <a href="http://www.fda.gov/ohrms/dockets/ac/01/briefing/3777b1_02_patient_info.pdf">http://www.fda.gov/ohrms/dockets/ac/01/briefing/3777b1_02_patient_info.pdf</a> .	
	3	BAR-COHEN, YOSEPH, Ed. "Electroactive Polymer (EAP) Actuators as Artificial Muscles: Reality, Potential and Challenges, SPIE Press, 2001, Chapter 1, pp. 3-44.	
	4	BAR-COHEN YOSEPH, Ed. "Electroactive Polymer (EAP) Actuators as Artificial Muscles: Reality, Potential and Challenges, SPIE Press, 2001, Chapter 7, pp. 193-221.	
	5	BAR-COHEN, YOSEPH Ed. "Electroactive Polymer (EAP) Actuators as Artificial Muscles: Reality, Potential and Challenges, SPIE Press, 2001, Chapter 16, pp. 457-495.	
	6	BAR-COHEN, YOSEPH, Ed. "Electroactive Polymer (EAP) Actuators as Artificial Muscles: Reality, Potential and Challenges, SPIE Press, 2001, Chapter 21, pp. 615-659.	
	7	BAR-COHEN, YOSEPH, Ed. WorldWide ElectroActive Polymers (Artificial Muscles) Newsletter, Vol. 3. No. 1. June 2001. pp. 1-14.	
	8	SHAHINPOOR, MOSHEN ET AL. "Design, Development and Testing of a Multi-Fingered Heart Compression/ Assist Device Equipped with IPMC Artificial Muscles". Smart Structures and Materials 2001: Electroactive Polymer Actuators and Devices. Yoseph Bar-Cohen, SPIE Proces. Vol. 4329. 2001. pp. 411-420.	
	9	JAGER, EDWIN W.H. ET AL. "Microfabricating Conjugated polymer actuators". Smart Structures and Materials 2001: Electroactive Polymer Actuators and Devices, Proceedings of the SPIE. Vol. 4329. pp. 335-349.	
	10	PELRINE, RON ET AL. "Applications of Dielectric Elastomer Actuators". Smart Structures and Materials 2001: Electroactive Polymer Actuators and Devices, Proceedings of the SPIE. Vol 4329. pp. 335-349.	
	11	MADDEN, JOHN D.W. "Polypyrrole actuators: modeling a performance". Smart Structures and Materials: Electroactive Polymer Actuators and Devices, Proceedings of the SPIE. Vol. 4329. pp. 72-83.	

Examiner Signature	Date Considered
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				Examiner Name	Lacyk, John P.
Sheet	3	of	3	Attorney Docket Number	01-468US2

	12	BAR-COHEN, YOSEPH. "Transition of EAP material from novelty to proactical application-are we there yet". Smart Strucutres and Material. 2001. Electroactive Polymer Actuators and Devices proceedings of the APIE. Col 4329. pp. 1-6.	
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